

## **CONSTRUCTION TECHNOLOGY LEVEL I & II**

**OVERVIEW:** TSA teams entering the Construction Event will be given a written test. Each finalist team will apply practical construction practices representative of the construction industry in a hands-on competition. The design will vary on an annual basis. This is a National Event.

I. PURPOSE

The purpose of the construction event is to provide a means for TSA team members to demonstrate their knowledge and skills of construction systems.

II. SCOPE OF THE CONTEST

A. This event consists of two parts. The first part consists of a written examination.

B. The second part consists of a hands-on competition for finalists.

III. ELIGIBILITY FOR ENTRY

A. Must be current TSA state and national member and registered State Conference participant.

B. This is a team event. Maximum of four teams per chapter, per level. Teams will consist of two chapter members teamed prior to the written competition.

IV. LIMITATIONS

The allotted time for the written test and the construction activity will be determined by the Conference Coordinator.

V. SPECIFIC REGULATIONS

A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

B. All testing and work will be done in the specified areas.

C. The written test will be administered prior to the construction activity. All participants will be tested simultaneously. One test will be given to each two member team on which the members may confer with each other for answers. The event team finalists will be determined by the highest written test scores.

D. Up to six teams per level (depending on the facilities), will qualify to participate in the hands-on activity.

E. Tools and materials may be provided. Check with the Conference Coordinator and the Event Consultant for a list of needed tools.

F. The teams will be observed by the judges and rated on their proper use of tools and safety practices.

G. The Event Consultant will provide the problem for the hands-on competition, and will also provide a list, for the planning team, of tools and materials needed for the event.

H. Judges will use the same measuring tools as the team.

- I. When entering the event room, the finalists will be given the evaluation criteria to perform the on-site activity. The event problem and criteria for evaluation will be available to TSA chapter advisors after the event is completed.
- J. Test questions for Level I and Level II finalists will vary from year to year, and will be selected from areas such as, but not limited to:
 

<ul style="list-style-type: none"> <li>1. Light Frame Construction</li> <li>2. Drywall/Insulation/Finishing</li> <li>3. Foundation Systems</li> <li>4. Electrical Wiring Application</li> <li>5. Structure Appreciation/Design</li> <li>6. City Planning</li> <li>7. Dams/Water Management</li> </ul>	<ul style="list-style-type: none"> <li>8. Transportation Systems</li> <li>9. Building Codes</li> <li>10. Excavation Problems</li> <li>11. Steel Building Commercial Applications</li> <li>12. Historical Outlook (Example: Building of Pyramids)</li> </ul>
---	---
- K. Activities for Level I finalists will be selected yearly by the State Advisor.
- L. Activities for Level II participants may include:
 

<ul style="list-style-type: none"> <li>1. Light Frame Construction</li> <li>2. Drywall/Insulation/Finishing</li> <li>3. Foundation Systems</li> </ul>	<ul style="list-style-type: none"> <li>4. Electrical Wiring Application</li> <li>5. Excavation Problems</li> <li>6. Plumbing</li> </ul>
---	---
- VI. REQUIRED EVENT PERSONNEL
  - A. Event coordinator.
  - B. Judges, minimum of three.
  - C. Timekeeper, monitor.
- VII. REQUIRED MATERIALS AND SUPPLIES
  - A. Tables and chairs for event judges and participants.
  - B. As long as conditions are adequate for the prescribed activity, and all teams are tested under similar conditions, construction activity may take place indoors or outdoors.
  - C. Stopwatch or clock for timekeeper.
  - D. Written test and construction problem.
  - E. Materials as required by construction plans.
  - F. Clipboards for judges.
  - G. Appropriate safety equipment and attire.

## VIII. CRITERIA FOR JUDGING

1.	Accuracy and Validity of Solution .....	35 points
2.	Completion of Solution.....	30 points
3.	Safe Work Practices .....	20 points
4.	Proper Utilization of Materials/Tools/Equipment.....	15 points
	Total.....	100 points maximum
	Rules Violation.....	Minus 20 points

The first, second, and third place teams will be determined on the basis of the score from the hands-on competition.